THE CHEMIST

MAY 1951 VOLUME XXVIII No. 5

PAUL F. BAILEY, F.A.I.C.

Chairman, Louisiana Chapter

(*See page* 165)

1876 J. W. Draper first president

1890 First national meeting held

1917 Committee on Analytical Reagents established

1937 National charter granted by 75th Congress

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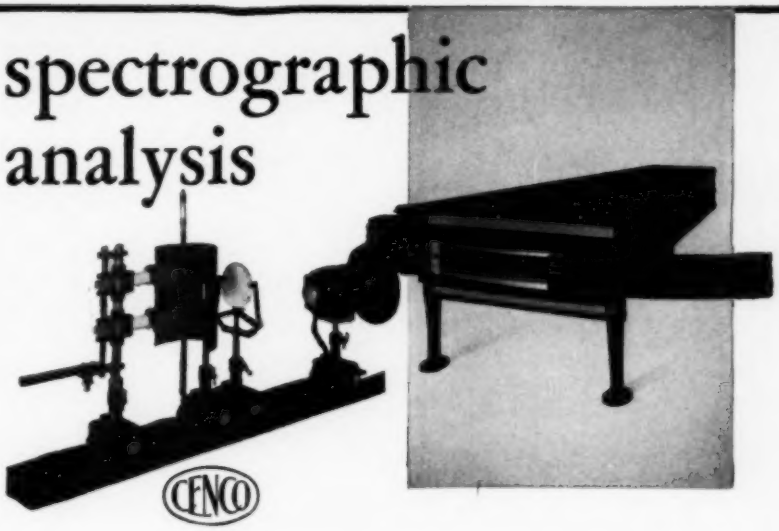

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Presentation of Ohio Award to Dr. Clyde E. Williams

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Cover Picture

Professor Paul F. Bailey, chairman of the Louisiana Chapter AIC, is assistant chairman of the Department of Chemistry of Loyola University, New Orleans, La.

He received the B.S. and M.S. degrees from Loyola University of New Orleans, and then attended St. Louis University for a year.

In 1930, he joined the faculty of Loyola University as an instructor. He was elevated to the rank of professor in 1946. He is the faculty sponsor of the Loyola University Chapter of Student Affiliates of the American Chemical Society.

He is a member of the New Orleans Academy of Science, the American Association for the Advancement of Science, the American Chemical Society (Alternate Councilor 1950-51 of the Louisiana Section), Chi Zeta Chi, national professional medical fraternity, and Upsilon Beta Lambda, social fraternity. He is an honorary member of Blue Key, National honor fraternity; Beta Epsilon Upsilon, national honor medical technology fraternity; Theta Beta, national honor biology society, and Agramonte, pre-medical society.

The objective for this year of the Louisiana Chapter is to publicize the role of the chemist in an effort to increase the enrollment of superior students in chemistry.

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President's Annual Report 1950-1951

THE AMERICAN INSTITUTE OF CHEMISTS is holding its Twenty-Eighth Annual Meeting. The meeting follows the pattern of last year's meeting, except that a third day has been added in order to permit the members to strengthen those bonds of friendship which must play a very important part in the development of chemistry both scientifically and professionally.

During the last year, the INSTITUTE took in 211 members. This number was substantially offset by losses through death, resignation and the elimination of delinquent members. Although there was little change in membership, 2489 in 1951 against 2460 in 1950, the membership was strengthened from a professional standpoint. The addition of the names of chemists of high repute to the roles has been gratifying. The INSTITUTE can boast with pride that there are among our membership the leaders of the chemical profession, well-distributed in industry, education, publication, and research.

During the past year, the petition for a new chapter, to be known as the Alabama Chapter, was favorably acted on by the Council. The New England Chapter has been formally organized.

The INSTITUTE's program directed to the recognition of professional accomplishments has been continued. During the past year, the names of Dr. Alexander Silverman and Jerome Alexander were added to the distinguished list of Honorary Members at meetings which brought out their great contributions to the profession.

Honor awards by the Chicago and New York Chapters have been continued, and to these has been added a new award known as the "Ohio Award", to be given annually by the Ohio Chapter. The first Ohio Award was made on April 26th to Dr. Clyde E. Williams of the Battelle Memorial Institute.

The 1951 Gold Medal of the INSTITUTE is being awarded to Dr. Harry N. Holmes, Professor Emeritus at Oberlin College and long a member of the INSTITUTE. He has been for many years one of the finest contributors to our professional literature.

Our publication THE CHEMIST has continued to improve in scope. An active program to obtain a wider contribution from the members has been carried out with success. THE CHEMIST is the individual responsibility of the members, and each member should accept both the responsi-

bility and opportunity to contribute articles of a professional character.

In the period since the formation of the INSTITUTE in 1923, the combined efforts of the members have served to eliminate most of the serious inequities and problems which existed in the profession at the time the Institute was founded. However, new problems related to changing conditions always present themselves faster than the older problems can be corrected.

Foremost among our current problems might be mentioned the inadequate supply of technical people for the prosecution of a new war, which has been aggravated by a general misunderstanding concerning the deferment of chemists and the part they play in war.

During the past year, the clinical chemists were formally organized and are now quite capable of handling their specific problems. As members are aware, the INSTITUTE contributed money, advice and help to bring this about.

There has been an increase in the chemist's problem of regaining money spent on a chemical education. It has become more and more important for a chemist to understand how successful work is carried on and how professional advances can be made.

Industry is still faced with the problem of a high inventory of completed research. Members should strive to move this out into productive channels.

Timidity with respect to capital expenditures is certain to increase the problem of carrying on large research laboratories on a profitable basis. This is corrected in part by the increase in industrial demand which is increasing the return from successful research.

During the past year, we have sought to bring a better understanding between management and the chemist. The effects of this can be seen reflected by changes in our membership and in our programs.

The President has enjoyed the cooperation of the officers, councilors, committees and chapter officers. This opportunity is taken to thank these people on behalf of the INSTITUTE.

—Lawrence H. Flett

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A Public Relations Man Looks at The Professional Chemist

Leonard H. Church

Technical Director, Hill and Knowlton, Public Relations Counsel, Cleveland, Ohio.

(A slightly condensed version of a talk given at the Annual Meeting, Ohio, Chapter, AIC, April 26, 1951)

WHAT is public relations? I have never seen a wholly satisfactory definition of it. . . . At the risk of over-simplification, let me put it this way:

Suppose you live in a nice residential suburb. One day you find that a new family named Smith has moved in, just two doors away. You wonder what Smith is like. You look forward to getting acquainted with him. But it turns out, apparently, that Smith has not the least desire to get acquainted with anybody.

Time goes on, but Smith does not invite you to his house and he does not come to yours. He does not even borrow the lawn mower. He may go to church some place—but you do not know where. His wife never shows up at P.T.A. meetings. They even keep their children to themselves. It is not long before there is considerable conversation going on about Smith. If somebody asks you about Smith, you say, "He acts as if he had something to hide. Maybe he is a counterfeiter or something."

A month later, another new family, named Jones, moves onto the street. Jones comes over and introduces himself the very first night. Three days later he throws a big party and invites in the whole neighborhood. There is too much to eat and too much to drink. He brags about how much it cost him. His wife tries to crash into the women's bridge club the very first month. He gives his kids too much money to spend. He makes a contribution to the church and insists that it be announced. When some of the men invite him to play poker, he wants to put the stakes too high; and he spends a good deal of the evening telling what a big shot he is in his company. It is not long before, if someone asks you about Jones, you say, "That four-flusher, I don't like him!"

Let us move still a third family, the Browns, onto your street. A week after they have moved in, Brown comes over to borrow hedge shears. It turns out he has a weed sprayer you would like to use. About a month later, your wife tells you she has met Mrs. Brown at the P.T.A. One of your neighbors remarks that they saw the Browns at church. Your

boy says the Brown kid is trying out for the basketball team. Your wife meets the Brown girl on the street and learns that she is going off to college that summer. In due course, you invite the Browns over for bridge. In conversation, you learn that Mrs. Brown is quite a musician. You ask your neighbor if he knows what Brown does. "Yes," your neighbor answers, "I happened to pick him up and drive him down town the other day. He's vice president in charge of manufacturing at the ABC Company. They have about seven-hundred men in the plant. He must have quite a responsible job."

So, gradually, the neighborhood learns about the Browns. If somebody says to you, "What kind of a fellow is Brown?" you say, "He's tops. He's got quite a job at the ABC Company. He doesn't say so, but it's my hunch that he's slated to head that company. I see him quite a little—he's chairman of our neighborhood school committee. You ought to hear his wife play the piano. His boy's on the basketball team. His girl's in college—majoring in psychology. My wife's fond of Mrs. Brown—sees her a lot at the Garden Club. You know he's quite a student of history. You ought to see his library."

Now it is entirely possible that Smith, Jones, and Brown were equally honest, equally capable, and equally good citizens. And yet, Brown was the only one of the three who was successful in his neighborhood relations. People suspected Smith because he would not tell them anything about himself. They disliked Jones because, in trying too hard to show everybody what a good fellow he was, he went beyond the bounds of good taste and thus defeated his own purpose. Brown did not force matters. He was not secretive like Smith, neither did he push like Jones. As opportunities developed in the natural course of events, he used them within the limits of good taste. In the process of getting acquainted, he did not hesitate, when people asked him, to tell them all about himself. After a year or two, everybody knew all about the Browns and liked them.

Public Relations for Industry

In principle, is there anything different between neighborhood relations for a family, and public relations for a business? The practice of public relations lies in the art of knowing how to get along with people—and this, in turn, is largely a matter of letting people know who you are, what you are, what you believe, and what you stand for.

The people that a business has, let us say, living in its own neighborhood, are of three kinds—employees, customers, and stockholders. Then there are the people living in the community as a whole. To a business, your business, these people are the general public. A company meets its employees, its customers, and its stock-

holders regularly, but to get acquainted with the general public, it must undertake certain public activities.

Dr. Gaston F. Du Bois, vice-president of Monsanto Chemical Company, had something to say on this subject: "If scientists and technologists are to play a greater part in the world of tomorrow, they must accept wider responsibilities which will take them out of the laboratories and plants and into the life of the nation. Do we, the technicians of the world, fully recognize these obligations? If so, what are we doing to meet them? How will we apply this torrent of new knowledge?"

Dr. Du Bois was thinking of the tremendous growth which has been, and is being, experienced by the chemical industry. He was thinking of how almost overnight the rubber industry has become a branch of the chemical industry, with an output valued at hundreds of millions of dollars. He was thinking of what has happened in the paint industry where the introduction of synthetic resins and new synthetic solvents has revolutionized process and products. He was thinking of developments in aluminum and magnesium which are considered as closely identified with the chemical industry. He was thinking of the petroleum industry where new operations such as catalytic cracking, alkylating, the solvent extractions, and hydrogenation, are chemical processes. And, most assuredly, he was thinking of the plastics industry which has grown by leaps and bounds and changed the course of events in a score of other industries, including the automotive, housing, electrical, paper, and textiles.

These technical achievements of the chemist are so many and so far-reaching in their social implications, that Dr. Du Bois had good reason to ask whether the men responsible for them were equally well-prepared to contribute as citizens to a higher degree of culture and civilization.

This brings us to the part public relations plays in such an effort and back to our three neighbors—Smith, Jones, and Brown. Fortunately, there are few companies today that are behaving as noisily as Jones. You see them once in a while—companies that try so hard, and so obviously, to tell everybody what good fellows they are that they achieve notoriety rather than goodwill.

Most of the companies who fall down in their public relations are like Smith. They live by themselves, and what they do is their business and nobody else's, or so they try to believe. This situation has been aggravated by the many attacks that have been made on business in recent years. Our secretive friend, Smith, without doing a thing, was already "in wrong" with his neighbors because he never told anybody about himself.

That is what has been happening to many a business, so far as the gen-

eral public is concerned. And yet so many men who are otherwise tops in their professions appear blissfully unaware of it. When the man on the soapbox accuses an industry of making inordinate profits; or a politician running for office accuses a business of a combination in restraint of trade, and nothing is done to tell the "neighbors" the actual facts—what should they be expected to think?

Public Relations is the job of telling people the facts about yourself. Let us get into the question of practice or mechanics. This is where many broadly conceived programs fall down, because the mechanics of public relations are highly technical and frequently quite unfamiliar to even the best-intentioned business and professional men.

The Tools of Communication

Public relations is primarily a communications job, and its practice involves an understanding of the practical use of the tools of communication. There are not too many ways of passing on information to people. There are really only three: the written word, the spoken word, and pictures.

The chief vehicles for the use of the the written word are: newspapers, magazines, trade and technical publications, house organs, books and pamphlets, letters.

The chief vehicles for the use of the spoken word are: speeches, sound films, radio, television.

Pictures, in the broadest sense, find use in all of these media.

How can these things be best used for public relations purposes? This is where the technician comes into the picture; and this is why there are public relations agencies and public relations departments. But here are a few suggestions from actual working practice. Let us start with newspapers. A company wants to get certain facts into the newspaper. But what the company wants is not the point. What counts is what the readers want. The editor is running a business. He has a product for sale. That product is news. If the facts a company sends him constitute news in his opinion, he will print them. If not, he will not.

Therefore, in order to get the desired material published, a company must have a news peg on which to hang it. What is news? Usually it is something that happens at a certain place or time. People hold a meeting; a man makes a speech; a company issues a report; announces a new building, or the establishment of a new department. To be news, these things must be connected with specific dates—yesterday, today, or tomorrow.

The technique involves hanging the information a company wants to present on news pegs that will give it editorial acceptance. It also involves writing the subject matter in a manner that makes it easily adaptable to

newspaper rewrite. We have some facts dealing with over-all operations, but there is no immediate news about them. If we take them to the newspaper, there is little chance of their getting published. So instead, the company executive makes a speech and incorporates these facts into it. A news release is written, based upon the speech, and the news release contains the vital information. The fact that a man made a speech is news, and so the item becomes acceptable to the newspapers.

There is another angle about news. It may be something that happens on a certain day, or it may be something different or unusual. You seldom see in a newspaper anything about things that are normal, or going along smoothly, no matter how important they may be. The extent to which most businesses meet payrolls regularly in this country is an amazing thing. It is a first class accomplishment. And yet, would you expect to see in your newspaper, a headline, "All local businesses met payrolls last week?" There would be no news in that. But let one of the companies fail to meet its payroll—that is front page news.

So, there are some facts about an industry, facts that you want people to know, that are frequently difficult to handle on a news basis. Sometimes to do the job requires the purchase of advertising space. More and more companies are doing this. They buy advertising space to tell the general public the facts which they are simultaneously presenting in an Annual Report to their employees and their stockholders. Such advertisements are also used by a whole industry to correct general public misconceptions about that industry. Such was the function of the advertisements published by the steel industry three years ago. This type of advertising is now known as "public relations advertising," as distinguished from that which has as its purpose the promotion of the sale of products.

Magazines and Booklets

Magazines are an important vehicle of communication to a more limited field. This is particularly true of business magazines and trade and technical journals. Here again, the basic question is not "What does the company want?" but "What do the readers want"? The editor is the judge of what will interest his readers. So, it is the job of the public relations technician to select and prepare material with an eye to editorial acceptance. This is a specialized type of writing with a technique quite different from that required for newspaper purposes.

The typical external house organ is a magazine published by a company and sent to its customers and its prospects. The typical internal house organ is a magazine published by a company for distribution to its employees. In both these cases there still

remains the same basic principle of bearing in mind the interests of the reader. With the external house organ, the primary consideration must be, "Will this material be of interest to the customer and prospect?" In the case of the internal house organ, "Will this material be of interest to the employee?" Since people who produce external house organs are sales-minded, the problem there is not so difficult. When you come to employee publications, it is amazing how easy it is to forget all about the employee's point of view and present management material purely from the management angle.

Booklets are an increasingly important means of communication with customers, prospects, businessmen in general, and the public. I refer to booklets in which a company, or an executive expresses a belief, or a business philosophy, or an opinion on some subject of broad interest. In years past, public opinion was molded to no small extent, by this device. All sorts of people issued and distributed "pamphlets"; and the term "pamphleteer" was applied to people who did what we now call public relations work. Probably the most important pamphlet in U.S. history was Tom Paine's "Common Sense" which plead the cause of the American Revolution. Booklets of this nature are important. Through them a company can make clear the kind of company it is, what it believes in, what its attitudes are. It is a method of revealing intangible qualities of character. These things determine in many cases whether a company is liked or disliked. Neither advertising nor publicity provides an adequate vehicle for this purpose, and the time-honored practice of pamphleteering fills this gap. To do this effectively requires careful styling. It is distinctly a literary job, just as much as trying to write an essay. The sentiments expressed may be those of an operating vice president who could no more phrase his ideas in the required style than a writer could direct the operation of machinery in the plant. So, there again, the professional technician enters the picture.

The personal letter is probably the most effective use of the written word, and it is amazing with what carelessness and lack of style many letters are written. This question comes up in a public relations office when there is need, for instance, for a company head to address a letter to his employees. What the letter should say may be clear. The question is, how to say it. How to maintain the formality of management, and at the same time strike a person-to-person level? How to explain in simple words without writing-down to the employee? How to translate technical or financial knowledge from management terms into everyday terms, and still keep the meaning accurate? The president of a company

said to us one day, "I want a letter to send to our employees along with our Christmas bonus checks. I want to pat 'em on the back for the job they've done, tell them how much we appreciate it; and tell them the job they did was only half as good as they ought to have done, and by God, if they don't do better, all hell will bust loose around this place—and wish them a Merry Christmas." Nevertheless, I do not know of any way of using the written word more effectively than in a really well-phrased letter; some company executives have adopted the policy of sending personal letters to their employees several times a year, reporting to them on the general state of the business.

Speeches

There is no substitute for personal appearance. You may have read a great deal about a man, but until you see him and have heard him talk, you do not get a clearcut concept in your mind of the kind of a fellow he is. A company is a collection of people, and so the impressions gained by the public about a company are often reflections of the personalities of that company's leaders. That is why public appearances of company officers are so important. Yet sometimes these public appearances defeat their own purposes. I do not know why some people assume, because a man is a research chemist, or engineer, or plant operator, that he is also an expert public speaker. Usually, he is not. Scientists, engineers, industrial men can be geniuses in their own right; but totally at a loss when it comes to making a speech, or even writing one. So speech-writing becomes a job for the technician—who keeps one eye on the audience, and the other on the newspapers and magazines which he hopes will report the speech. He will phrase the speech so that two or three pertinent paragraphs can be lifted from it and put into a news release. There may be a few people at the meeting, but the number of newspaper readers may add up into the millions.

From the employee relations standpoint, there is no substitute for the spoken word. Here is one place where writing a speech in advance is sometimes singularly ineffective. The men in the plant do not warm up to prepared manuscripts. If a man's got something to say, why can't he just say it? So preparation often boils down to outlining the sequence of the talk, and then going through several advance rehearsals.

In the case of a large corporation, it is impossible for the head of the company to talk in person to all the employees. To overcome this difficulty, some companies are now trying sound movies. One company has experimented with the idea of making a report to its employees by gathering them together into departmental groups. The meeting starts with a sound movie, with the president of

the company appearing on the screen to explain what the meeting is about. The rest of the meeting is then conducted, in person, by the unit manager, who reports on the year's operations to the employees, and asks for questions. This enables the employees at least to see what the head of the company looks like, and to hear him talk. Sound movies are also being used for educating employees and the public in the basic principles of economics, such as Goodyear's "Letter from America" and Burroughs' "In Balance." These successes have led many other companies to say, "We ought to get out a movie."

Radio and Television

There is no question but what radio, and now television, have become the most powerful means of communication today. They are also most difficult to use for ordinary public relations purposes. Every once in a while an industry gets the idea, "Wouldn't it be wonderful if we could get our message on the air?" Somehow it wangles fifteen minutes of free time, and a company vice president goes on the air with a speech. Who listens to it? How many speeches do you listen to over the air, unless they are made by people whom you know, or by people of national prominence; or unless they are on a subject of widespread public interest? What counts is how many people stay tuned in. A well-dramatized program may be very effective; but this usually requires the services of a professional script writer and professional actors as well. Put the ordinary businessman in front of a microphone or a television camera, and his performance becomes as stilted as that of a small boy reciting a piece in school. Here again, in this age of specialization, technicians are necessary.

This is a brief summary of the tools of the trade. Simply deciding to make use of public relations as a means of making people better acquainted with your work is not enough to get the job done. Performance requires technicians who are specialists. They may not be systematic—in fact, some are no more than alert opportunists, who know news when they see it, and how to make the most of it. That is why there are public relations agencies or departments.

Responsibility

The term "Fifth Estate" was once applied by the late Arthur D. Little, to identify those who are concerned with the advance of science. More recently Wallace P. Cohoe, F.A.I.C., suggested that this "Fifth Estate" interest itself is helping to solve some of our postwar international problems.

In the light of present-day developments, I wonder if our job does not lie much closer to home? If it is not an over-all public relations job which

must become the responsibility of all of us, if we want to see our country continue a free nation.

After we had won our independence in 1776, there was danger that the whole structure of our new government might fall to pieces for lack of a framework defining the principles under which it would operate. For this purpose, the "Constitutional Convention" of 1787 was called. I hope you have read the story of that Convention as written by Carl Van Doren in "The Great Rehearsal." In that Convention the bulwarks of our form of government were threshed out and defined, crystallized and formulated into our Constitution. Then came the job of getting the Constitution ratified by the thirteen States. This had to be done by the legislative bodies of those States. These legislators, in turn, were swayed, as they are today, by the beliefs and attitudes of the voters. It was necessary, therefore, to take the proposed Constitution to the people, in an effort to get the public to understand and approve it, and therefore give the State Legislature support in voting for its adoption. This was the most important public relations job ever done in our country, perhaps, as history may some day show, in the whole story of mankind.

The job was tackled by three expert publicity men, Alexander Hamilton, James Madison, and John Jay. The articles they wrote about the proposed Constitution were printed in New York and other newspapers. They are called "The Federalist Papers." Thus the principles of our form of government were presented to the public.

There was an acrimonious debate on the subject. Arguments were brought forward on the other side, just as today. For awhile there was grave doubt as to whether the Constitution would be adopted. But the arguments of Hamilton, Madison, and Jay won; and finally by 1788 nine states had approved the Constitution. That insured the continuing existence of our United States of America. But the States of New York and Virginia trailed behind, and the last State, Rhode Island, did not come in until a year and a half later. Getting our Constitution approved was a long, hard job.

Today the world is filled, just as it was then, with arguments opposing the principles upon which our Constitution is built. It is time again, as it was then, to do a public relations job. In those days, this job was done chiefly by politicians, lawyers, and men of public affairs, because such men stood out as the leading people in the nation. Industry was as yet in its infancy.

But since that time we have built an industrial civilization. Men in industry have become key people in our economic system, and are so recognized by the public. Today, it is in-

cumbent upon everyone to step forward, as did Hamilton, Madison, and Jay, to recite the accomplishments of his industry and his fellow scientists under a free economy, and to work aggressively for the preservation of our system of private initiative.

Baker Appoints Wittenberg

The J. T. Baker Chemical Company, Phillipsburg, N.J., announces the appointment of Robert Wittenberg to the position of Sales manager of the Industrial Chemical Division. Previously with International Minerals and Chemical Corporation of Chicago, Mr. Wittenberg has been associated with Baker Chemical for the past two years.

T. H. Hopper, F.A.I.C., of the Southern Regional Research Laboratory, New Orleans. La., is chairman of the program comittee of the Spring Meeting of the American Oil Chemists' Society, to be held May 1st-to 3rd, at the Roosevelt Hotel, New Orleans.

Dr. Donald B. Keyes, F.A.I.C., toured the Southwestern Sections of the American Chemical Society during January, as speaker on the following subjects, "Factors Involved in the Appraisal of a Chemical Development," and "Fractional Distillation Problems."

Zirconium Metal Production

Plans to encourage wider industrial participation in the manufacture of high-purity zirconium metal for the nuclear reactor development program are announced by the Atomic Energy Commission. Technological information about unit processes for purifying zirconium tetrachloride may be made available to private producers who can supply zirconium metal or intermediates on a unit price basis. Manufacturers who are interested should write Division of Engineering, Atomic Energy Commission, Washington 25, D.C.

Samuelson Joins Columbian

Dr. George S. Samuelsen, F.A.I.C., formerly assistant professor of biochemistry at the New York State University Medical Center, has accepted an appointment as biochemist at the Research Laboratories of the Columbian Carbon Company, Brooklyn, N.Y.

"Cocoon"

The Cocoon Engineering Division of the R. M. Hollingshead Corp., 840 Cooper St., Camden 2, N.J., has been merged with the Industrial-Aviation Division of the corporation. "Cocoon" is the vinyl plastic spray film developed by the corporation in cooperation with the U.S. Government for spray-coating planes, ships, and war materials, for outdoor storage.

Chemical Abstracts, Good Buy or Goodbye

Dr. E. J. Crane

Editor, Chemical Abstracts

The Ohio State University, Columbus 10, Ohio

(Abstract journals are going through a critical period. Dr. Crane's timely article deserves the serious consideration of every one in the chemical profession.)

CHEMICAL ABSTRACTS is a service. To be maintained as a truly good service, this journal must also be a sufficiently good business enterprise to break even. Ours is a nonprofit undertaking of a kind which often needs help, but it must now more nearly stand on its own feet. *Chemical Abstracts* can stand on its own feet and grow.

Subscription prices, formerly very low when subsidy was available as needed, have been moved up in 1951. May I point to reasons why subscribers can continue to look on *Chemical Abstracts* as a real bargain.

Part of a bargain depends on intrinsic value in the product or service purchased—quality as well as quantity. An abstract journal provides a good service only if it does the following: (1) Covers its field completely, (2) furnishes adequate, clear and accurate abstracts, (3) publishes these abstracts with reasonable promptness, (4) is thoroughly and scientifically indexed, (5) keeps on its toes to meet developing circumstances and needs, and (6) is available at a rate which makes wide distribution possible.

Completeness, so very important in an abstract journal, requires that the journal keep pace with the growing literature of its field and that it overcome the obstacles which at certain times make the obtaining of publications for abstracting from some parts of the world extremely difficult. During 1950 *Chemical Abstracts* published 47,496 abstracts from papers appearing in 5300 periodicals published in 31 languages; it also published 10,063 abstracts of patents. The total was 57,559 abstracts and these provided pretty thorough worldwide coverage.

Publication of chemical papers climbed 17.0% in 1950 over 1949 and 13.2% in 1949 over 1948, an increase of over 30% in two years.

The more difficultly accessible scientific literature, such as that of the Soviet Union and of Japan, was not neglected.

Keeping pace with such growth of the literature during a time when unit costs have been going up on all sides is reason in itself for an advance in subscription prices.

Completeness is a matter of adequate individual abstracts and of thorough indexing as well as of the reporting of all published papers containing new information of chemical interest.

Some abstracting services provide mere annotations, others give only descriptive or indicative abstracts, and others publish full abstracts which include the more significant results and conclusions of the studies reported. *Chemical Abstracts* attempts to provide informative abstracts (the third category above) in most instances, with particular emphasis on this if the source is rare or the language difficult. Great emphasis is placed on having abstracts complete from the indexing point of view. This involves including every measurement, observation, method, apparatus, suggestion, and theory which is presented as new and of value in itself. It also requires the reporting of all new compounds and all elements, compounds, and other substances for which new data are given. With exception for certain special situations each abstract is prepared by an abstractor who is trained and experienced in the field represented by the subject matter of the paper or patent being covered. Abstracts are not always good, but it is believed that the right kind of abstract is sought, that the method is right, and that the kind of individual willing to help by abstracting rarely fails earnestly to try to do a good job. One of our slogans is: "To authors it's fairer the rarer an error."

While *Chemical Abstracts* will cover a missed chemical paper even if it is two or three years old (or older if circumstances are special, as interference by a war), an effort is made to get abstracts into print within a few weeks or at most within a few months after papers appear. In this connection it can be said that it takes one month for an abstract to go through the printing mill, that some journals appear, or at least reach this country, well after the publication date given on the cover, that the method of using the part-time help of busy specialists sometimes leads to delays which are not sufficient to counteract the advantages of this method, and that a journal which goes after everything cannot be quite so prompt on the average as a publication which covers only a limited, somewhat standardized, and perhaps more easily accessible series of publications.

Thorough indexing is extremely important in an abstract journal. Approximately half of the effort expended in the office of *Chemical Abstracts* is devoted to the indexes. Authors, Subject, Formula, Numerical Patent, and Ring System Indexes are published annually and collectively. The indexing of compounds with its requirement for systematic naming and entering by formulas as well as by names, is a particularly exacting

and time-consuming task, but a complete record of information concerning chemical compounds is of much value to chemists.

Since an abstract journal, with its indexes, constitutes a permanent record much used for searching back through the years, there is a value in a certain degree of conservatism in policies and practices. Stability has value. Nevertheless times and needs do change and all undertakings should grow in other ways than in size. In an effort to prove my point as to value received by subscribers and at the risk of seeming to lack modesty I am going to point to some pioneering steps taken by *Chemical Abstracts* which it is hoped may be regarded as progressive looking out for the needs of users. These steps might be referred to as "firsts."

Chemical Abstracts was the first abstract journal to cover industrial as well as theoretical chemistry. The abstracting of industrial chemistry or chemical engineering was restricted to *Z. angew. Chem.* in Germany for many years and to *J. Soc. Chem. Ind.* in England.

We initiated the use of the entry-a-line form in subject indexing. This is quite effective in facilitating searching.

Chemical Abstracts was the first abstract journal to name organic compounds systematically and to use inverted index names.

We were the first to publish an Introduction to subject indexes with emphasis on *subject* indexing as opposed to the indexing of *words*. Our subject indexes are completely independent of their introductions, but a good deal of information helpful to searchers is provided.

We were the first to publish a Formula Index.

We introduced the idea of an index of ring systems and were the first not only to provide such an index, but also to furnish systematically numbered ring cuts in a chemical subject index.

We were the first to go in for solid composition to save space.

We were the first to designate page fractions in our indexes and eventually to number columns instead of pages. The narrowing of references, now to 1/18 of a page, has really been a very effective way to facilitate the location of information.

We were the first to issue special instructions and comment (15 pages) on patent abstracting. This is of value to readers as well as to abstractors.

We were first to publish a List of Periodicals with library data.

We were the first to work up a photocopying service.

We were the first to publish a nomenclature treatise.

Many of these steps have been imitated by the other chemical abstract journals since *Chemical Abstracts* started them.

Growth in other ways is perhaps

shown by the following statistics.

In our effort to provide fuller information, abstracts of papers have been increased 15.9% in length over those of ten years ago and abstracts of patents have gone up 52.6%.

Our annual Subject Indexes have climbed from 2.9 entries per abstract in 1937 to 5.6 entries per abstract in 1948, a 71.6% increase. *Chemical Abstracts* was one of the most thoroughly indexed abstract journals even before this climb was made.

Then there has been some pioneering in methods, such as the use of wire recorders in subject index preparation and of an inverted cross reference system to keep the entries consistent.

While the annual indexes to *Chemical Abstracts* do not appear as promptly as we would like and the quality of the task is never sacrificed for speed, nevertheless these indexes do appear early as such undertakings go. Early indexes add much to the value of an abstract journal's service.

Collective indexes for all of the five kinds above mentioned are now published. The latest kind to be added is a 27-year Collective Formula Index, which is now in preparation and the first volume of which will appear early in May. This 921 page volume will be one of two. This index is an undertaking surpassed in size and promise of usefulness only by the four Decennial Author and Subject Indexes which have been published. The Decennials total 29,376 pages. The large, fine-print, solid-composition, three-column index page contains 3½ times as many words as does the average textbook page and yet the last Decennial Index sold at a rate of two pages for a penny to members of the American Chemical Society and at a rate of one page for a penny to nonmembers. A textbook at a penny a page now is hard to find. If our page were like that average textbook page, ACS members would have received seven pages for a penny. These rates are mentioned because one of the purposes of this article is to say: "Good by." The collective indexes to *Chemical Abstracts* are now priced to pay for themselves.

Chemical Abstracts has undertaken to be a leader in the development, use, and sharing of chemical nomenclature rules and information and if you look into the record in this connection I think you will find that chemical industry, at first careless in this connection and uninterested, is now very much interested and is profiting by the progress made, both in its own record keeping and in other ways, as in marketing and research.

After having pointed to some matters which perhaps have a bearing on the quality of the purchase made by subscribers to *Chemical Abstracts*, may we point to some data on the side of quantity?

In purchasing journals it is ob-

viously not wise to think of annual volumes as constituting approximately equal units. Neither can one make proper comparison on the basis of pages because pages vary widely in size and in the amount of type on a page because of differences in size of type, in extent of margins, and in space between lines. The 1950 annual volume of *Chemical Abstracts,* with its indexes, will contain approximately ten million words. Some chemical journals with approximately the same subscription price last year contained no more than 1/40 to 1/80 as many words. An annual volume of *Chemical Abstracts* now contains about 10 times as many words as the average wordage for 36 other scientific journals, mostly chemical ones, selected for study merely because they were regarded as the more prominent and widely used journals in this class. Is not a comparison made in terms of words instead of pages or volumes proper in weighing subscription prices?

During 1950, ACS member subscribers to *Chemical Abstracts* paid 1.0¢ per 10,000 words for this journal. Nonmembers paid 2.0¢ per 10,000 words. No scientific journal sold for lower price on a wordage basis. During 1951 even at the $60 annual subscription rate for nonmembers the cost per 10,000 words will be only 5.3¢. The average cost per 10,000 words for the 37 journals above mentioned comes out 30.9¢.

Chemical Abstracts has had certain advantages in its effort to do a good abstracting and indexing job. Many have been willing to help as abstractors and as section editors. Subscribers have been numerous and the backing of this publication by the American Chemical Society has been steady and generous. We have had our difficulties and struggles, but have never been confronted with severely handicapping lack of funds.

Now as we go more definitely on a pay-our-own-way basis let me say, first, that we look on *Chemical Abstracts* as far from faultless, and yet hope that in consideration of the information given above chemists will regard this journal, both from a quality standpoint and from a quantity standpoint, as a good buy. This is important. There must be no lowering of our service in any way. I think there will not be. Our attitude is that, in spite of the growing bigness of its field, *Chemical Abstracts* must justify the needed support by being thoroughly worth whatever must be charged to subscribers. Chemists will not say "Goodbye" to a truly good buy of this kind.

General Ceramics and Steatite Corporation, Keasby, N. J., announces that it is manufacturing a new line of chemical process equipment, made from cold cast Pennsalt resins, to meet corrosion resistant requirements.

Necrology

James E. Mills

James E. Mills, director of chemical research, Sonocco Products Company, died August 12, 1950, at the age of seventy-four. He was born in Fairfield County, South Carolina. He received the A.B. and the A.M. degrees from Davidson College, North Carolina and the Ph.D. from the University of North Carolina. He studied at the University of Berlin and was awarded an honorary D.Sc. from the University of South Carolina.

From 1900-10 he was with the University of North Carolina, first as assistant in chemistry, then as instructor and finally as associate professor. He was lecturer on chemistry at the University of South Carolina from 1911-13, and professor from 1913-21 and again from 1930-34. He was technical director of research and development with the Chemical Warfare Service at Edgewood Arsenal, 1921-24, and chief of the Chemical Division, 1924-29. During 1929-30, he was chairman of the Division of Chemistry and Chemical Technology, National Research Council. He joined the Sonocco Products Company as chief chemist in 1934, later becoming its director of chemical research.

He was active in the Chemical Warfare Service, being commissioned captain in 1918, later becoming Lieutenant Colonel, before his retirement in April, 1940.

His major interests were physical chemistry, gas warfare and certain types of paper products.

He was a member of The American Association for the Advancement of Science, the American Chemical Society, the Engineering Society and the Society of Chemical Industry. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1941.

Harry T. Newman

Harry T. Newman, director of laboratories, Department of Purchase, City of New York, died March 4, 1950, at the age of sixty-four. He was born in Brooklyn, New York, and received his chemical training at the Polytechnic Institute of Brooklyn.

In 1912, he started with the Department of Purchase, City of New York, as chemist, doing analysis and tests of supplies and materials sold to and used by the City of New York. He rose from that position to director of the laboratories of the Department of Purchase. His work was extremely varied, covering construction materials, including cement, concrete, brick, stone, steel and other metals, glass, chains, cables and rope; physical, chemical and microscopical

tests on textiles, paper, leather, chinaware, linoleum, brush and broom stock, asphalt, oils, pigments, lubricants and the other supplies necessarily purchased for the operation of a city of the size of New York.

He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1930. He was actively interested in his profession, and helpfully contributed to the INSTITUTE'S program.

John H. Kelly, Jr.

John H. Kelly, Jr., consultant, died April 14, 1951, of uremic poisoning, at the Good Samaritan Hospital, at the age of fifty-three. He was born in Chicago, Illinois. Because of total deafness he had been privately tutored from infancy.

In 1921 he joined the Hewitt Rubber Company where he advanced to assistant superintendent before being transferred, in 1926, to the Metric Packing Co., a subsidiary, as factory manager. In 1928, he became general technical analyst and field surveyor of oil well products with J. H. Kelly, Sr., in Oklahoma, until 1931. From 1931 to 1934 he did research and development on chlorinated rubber coatings with Rubprotex Corporation. He practiced as a consultant from 1934 to 1936. He joined the Dryden Rubber Co. as research chemist in 1936, advancing to director of research before he left in 1943. He was research chemist for the Wabash Research Division of the General Tire & Rubber Company from 1943 to 1946. He left this organization to open his own consulting practice.

This remarkable man, born totally deaf, possessed such abilities and skills that he became successful as a factory manager as well as a director of research. He held several patents and published a number of papers in his specialized fields, which included rubber technology, colloids, synthesis, development and physical research.

He was elected a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1946.

Karl D. Schaaf

Karl D. Schaaf, research chemist, D. A. Stuart Oil Co., Ltd., died November 2, 1950, of cerebral thrombosis at Saint Luke's Hospital, Chicago, Illinois, at the age of forty-one. He was born in Dale, Indiana. After obtaining the A.B. degree from Evansville College and the M.S. from the University of Wisconsin, he did further graduate work at Purdue University.

He was an instructor in chemistry at Evansville College from 1932 to 1937 and assistant instructor in organic chemistry at Purdue University from 1941 to 1945. For a short period in 1945, he was head chemist of Enoz Research laboratory, doing research and development work on insecticides. In 1945 he joined the

D.A. Stuart Oil Co., Ltd., as a research chemist, where he remained until the time of his death.

He was a member of the American Chemical Society. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1945.

In Memorium

In the sudden death, on April 14, 1950, of Vaman R. Kokatnur, the Institute lost a long-time loyal member, and international science, a staunch supporter and able exponent.

Vaman Ramachandra Kokatnur was born at Athani, Bombay Presidency, India, on December 16, 1886. He received his B.Sc. at Fergusson College (Bombay University) in 1911, and worked one year as chemist in the Ranade Industrial Institute at Poona before coming to America. After a year at the University of California, he went to the University of Minnesota as Shevlin Fellow, and there earned his M.S. and Ph.D. degrees.

After some teaching, Dr. Kokatnur did chemical research for the Mathieson and Niagara Alkali Companies, National Aniline and Chemical Company, By-Product Steel Corporation, and Du Pont, before establishing himself as a consultant in 1922. In 1928 he was adviser to the Russian government for regulation of caustic soda and chlorine; and soon started his valuable liaison work with India, as consultant both in industry and to the American Consulate and Trade Commissioner. In 1934 he established the Autoxygen Company, New York, to develop his own inventions.

For these, Dr. Kokatnur held over thirty patents. In the Chemical Warfare Service he made many notable contributions—airplane dopes, war gases, M-59 bomb, and jellied gasoline for flame-throwers. His greatest contribution was the merging of his two cultures. Always interested in the Indian colony and visiting Indian students, he served on the Advisory Board of the Watumull Foundation for educational scholarships. A memorial scholarship is being established by his Indian friends. "Koke" became an American citizen in 1921, and a Fellow of the AIC in 1926. His chief hobbies were Indian science and Egyptology, which profited by early knowledge of ancient languages and dialects.

Dr. Kokatnur is survived by his wife, formerly Miss Helen Graber of Minneapolis, whom he married in 1921, and two children who worthily carry on their intellectual heritage: Urmila, Assistant Attache at the American Embassy in New Delhi; and Arvind, a civil engineer in New York. They have presented his fine library to Fergusson College, and it is to be hoped that they will make available his unpublished papers for what they may reveal of the Indian origins of science and invention.

—F.E.W.

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April Meeting

The 275th meeting of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS was held April 11, 1951, at 6:00 p.m. at The Chemists' Club, New York, N.Y. President Flett presided.

The following officers and councilors were present: Messrs. L. H. Flett, K. M. Herstein, F. A. Hessel, M. J. Kelley, F. D. Snell, L. Van Doren, Miss F. E. Wall, J. R. Withrow, and L. T. Work. V. F. Kimball was present.

The program for the Annual Meeting was presented.

President Flett reported that he had attended the A.I.C. breakfasts held during the Boston and Cleveland meetings of the American Chemical Society. He announced that the Ohio Chapter will make its first award, the Ohio Award, to Dr. Clyde E. Williams of Battelle Memorial Institute, on April 26th.

The Secretary reported that we now have a total of 2472 members.

The Secretary announced, with

deep regret, the death of Emory F. Marsiglio, F.A.I.C., on March 22, 1951.

The chairman of the Committee to Arrange an AIC dinner during the week of the International Congress, submitted a report announcing that the dinner will be held September 11, 1951, at the Hotel Commodore, N.Y.

Miss Wall reported that she was preparing a salutation from the AIC to the Fifth South American Congress of Chemistry. Upon motion, Miss Wall was requested to prepare and send this greeting.

Dr. Work reported progress for the Committee to Consider Manpower Problems. He also reported progress for the Committee on Constitutional Revision.

The report of the Tellers on Nomination Ballots was presented. The following new members were elected:

FELLOWS

Bonnar, James Robert
Manager Tech. Service & Commercial Development, General Dyestuff Corp., 435 Hudson Street, New York 14, N.Y.

Brennan, Humphrey Charles
Commercial Development Representative, Industrial Tape Corp., New Brunswick, N.J.

Brunn, Johannes H.
Director of Research, General Aniline & Film Corp., Easton, Pa.

Buckwalter, Frank Harold
Director of Product Development Dept. Bristol Labs., Inc., Syracuse, New York.

Capkovits, Stephen G.
Chief Chemist, Prince Matchabelli, Alfred D. McKelvy, Sofskin Co., Prince Matchabelli, Inc., 60 West St., Bloomfield, N.J.

Fainman, Morton Z.
Research Chemist, Heavy Oils Research, Standard Oil Co., P. O. Box 431, Whiting, Ind.

Kanegis, James
Chief, Chemical Section, Office of Technical Services, Depart. of Commerce, Washington, D.C.

Kunin, Robert
Laboratory Head, Ion Exchange Application Lab., Rohm & Haas Co., 5000 Richmond Street, Philadelphia, Pa.

Langsam, Sarah S.
Co-owner & Director, Alpha Medical Labs., 1777 E. 15th St., Brooklyn, N.Y.

McEwen, Robert Lemuel
Group Leader, Pulp & Paper Res. & Dev. Buffalo Electro-Chemical Co., Inc., Station B., Buffalo 7, New York

Pollak, Arthur
Consultant, 1718 Grand Avenue, New York 53, New York

Riley, Walter James
Director, Technical Sales Div., Westvaco Chemical Div., Food Machinery & Chemical Corp., 405 Lexington Avenue, New York 17, New York.

Smith, Joshua D.
Chief Chemist, Research & Control, International Lubricant Corp., P.O. Box 390, New Orleans, La.

Wilson, Thomas Lee
Head of Patent & Information Service, U.S. Rubber Co., General Labs., Passaic, New Jersey.

MEMBERS

Brunetti, Rose Marie
Research Assistant, Armour Research Foundation, 35 West 33rd Street, Chicago, Ill.

Lopatin, Anna Fay
Teacher of Chemistry, Chicago Board of Ed., Hyde Park H.S., 6220 Stony Island, Chicago 37, Illinois.

Miller, John F.
Research Chemist, Res. & Development, Durez Plastics & Chem. Inc., North Tonawanda, New York.

ASSOCIATE

Huber, Frederick John
Chemist, Marine Paint & Varnish Co., 8301 Fig St., New Orleans, Louisiana.

Conference on Radioisotopes

The Case Institute of Technology, Cleveland, Ohio, held a five-day conference on radioisotopes in industry, April 2nd to 3rd, to encourage a safe and wider industrial use of radioisotopes.

Aries Forms New Division

Dr. Robert S. Aries, F.A.I.C., president of R. S. Aries & Associates, announces the formation of a Statistical Engineering Division. Under the direction of Frank M. Culpepper, Dr. David B. Hertz and Dr. Sebastian B. Littauer, this division will specialize in the application of statistical methods to the process industries.

Research Corporation Elects

The Research Corporation, 405 Lexington Ave., New York 17,N.Y., announces that J. William Hinkley has been elected vice president and secretary. He will continue to direct the Division of Patent Management.

Refrigeration Unit

Croll-Reynolds Co., Inc., New York, N.Y., announces that the largest steam jet refrigeration unit ever built for making pharmaceuticals — a 900-ton-capacity installation —was completed recently at the Groton, Conn., plant of Charles Pfizer and Company, to aid in the manufacture of antibiotics.

AIC Activities

C. P. Neidig, F.A.I.C.

Chicago Chapter

Chairman, Bruce M. Bare
Vice Chairman, Dr. B. S. Friedman
Chairman-elect, Dr. W. B. Hendrey
Secretary-treasurer,
Dr. Glen Hedrick
Representative to National Council,
Dr. Gustav Egloff

The Honor Scroll of the Chicago Chapter, AIC, awarded annually for distinguished service to the science and profession of chemistry, will go this year to Dr. H. I. Schlesinger, professor emeritus at the University of Chicago. Dr. Schlesinger is being honored for his research in the field of inorganic chemistry, particularly on hydrides of boron and related compounds; for his outstanding influence as a teacher; and for his contributions to the work of the Atomic Energy Commission and the Office of Scientific Research and Development.

Dr. Schlesinger received both his undergraduate and graduate training at the University of Chicago. Except for two years of post-doctorate study in Berlin and Strassburg, and one year on the staff at Johns Hopkins, he has spent his entire professional career with the University of Chicago, where he has been a member of the faculty for forty-three years. He is a member of the National Academy of Sciences and the American Association for the Advancement of Science and is a past chairman of the Chicago Section of the American Chemical Society. He is the author of a leading textbook on organic chemistry.

The award will be made at a dinner meeting to be held in the fall.

New York Chapter

Chairman, Dr. M. J. Kelley
Vice Chairman, Dr. A. F. Guiteras
Secretary-treasurer, G. A. Kirton
Representative to National Council,
Karl M. Herstein

The New York Chapter will hold its annual meeting, May 24, 1951, at the Hotel Commodore at 8:15 p.m.

Interscience Publishers, Inc., will hold a reception, beginning at 6:15 p.m. in honor of Dr. Raymond E. Kirk, F.A.I.C., of Brooklyn Polytechnic Institute, who will be awarded the Honor Scroll of the New York Chapter for 1951 at the Annual Meeting. Interscience has invited all those attending the dinner to be its guests at the reception.

At the award of the Honor Scroll to Dr. Raymond E. Kirk, Dr. Walter J. Murphy, Hon. AIC, editor of *Chemical & Engineering News,* and Dr. Harry S. Rogers, president of Brooklyn Polytechnic Institute, will speak on the personal and professional side of the award winner. Non-members of the AIC are wel-

come to attend the meeting.

Dr. Gustav Egloff, Hon. AIC, addressed the American Society of Brewing Chemists, Inc., at the convention held in Chicago on April 23rd. He leaves for Europe on May 20th, via Pan American Airlines, and on May 24th, he will give the biennial "Romanes Lecture in Chemistry for 1951", at the University of Edinburgh, Edinburgh, Scotland. On May 26th, he will speak at the University of Birmingham, Birmingham, England.

From England, Dr. Egloff will proceed to the Third World Petroleum Congress meeting at The Hague, Holland, (May 28th to June 6th), to speak on "Polymerization with Solid Phosphoric Acid Catalyst." He will then lecture at the University of Milano, Milan, Italy.

Wiliam R. Willets, F.A.I.C., of the Paper Development Laboratory of Titanium Pigment Corporation, New York, N. Y., spoke on "Fillers and Loading", before the Pulp and Paper Division of the Chemical Engineering Department at the University of Maine, February 27th.

Kolker Chemicals Works, Inc., Newark, N.J., announces that commercial production of benzene hexachloride at the new Houston, Texas, plant was started last Fall to relieve the shortage of this insecticide.

McNeil Appoints

McNeil Laboratories, Inc., Philadelphia 32, Pa., announce that Dr. Albert M. Mattocks, formerly director of the Laboratory of the American Pharmaceutical Association, has been appointed manager of McNeil's Pharmaceutical Development Department.

Lithium Replaces Lead

The Foote Mineral Company, Philadelphia 44, Pa., announces that lepidolite, a lithium ore, can replace lead in the glass of television tubes, and now bids to replace scarce nickel in certain electronic applications. In the ceramic industry in 1950, approximately 10,000 tons of lead was replaced by lithium.

South American Survey

E. Andrew Aries of R. S. Aries & Associates, New York, N.Y., is on a three months' tour of South America to conduct an industrial market survey for the establishment of processing and chemical industries, on behalf of U.S. concerns and investment institutions.

Premedical Education Conference

The fourth Regional Conference on Premedical Education, sponsored by Alpha Epsilon Delta in cooperation with the University of Alabama, was held March 23rd and 24th at the University of Alabama, Tuscaloosa, Alabama.

Opportunities

Doris Eager, M.A.I.C.

Chemists Available

Industrial Chemist. Training manufacture textile chemicals; pharmaceuticals; organic chemicals. 15 years experience purchasing; cost calculations; trouble shooting; sales; supervisory capacity. Location open. Native born. Single. Age 38. Box 50, THE CHEMIST.

Market Research Trainee. B.S. chemistry, 1948; graduate study in marketing, chemistry. Some general experience. Single. 28. Veteran. Box 52, THE CHEMIST.

Patent Attorney. Ph. D. Columbia University, 1937, registered before U.S. Patent Office, over 5 years patent experience plus 5 years industrial experience. Age 43, married and draft-exempt. Fields of special knowledge pulp and paper, petroleum, plastics, and synthetic patents. Box 54, THE CHEMIST.

Positions Available

Chemist. Experienced in montan waxes, lignite products, or related. Production, research, control. New plant located in California. Box 51, THE CHEMIST.

Plant foreman. Experienced in etching, plating, anodizing of metals. Supervisory qualities. Salary from $75-125. Box 53, THE CHEMIST.

Gulf Production Increase

By the end of 1951, additional equipment for the Port Arthur refinery of The Gulf Oil Corporation will have resulted in the yearly production of 9,000,000 pounds of isooctyl alcohol, raw material for the vinyl plastics industry.

Armour Pharmaceutical Center

Armour Laboratories will build a modern pharmaceutical plant, the Armour Pharmaceutical Center, for the production of ACTH, other hormones, enzymes and rare drugs, at Kankakee, Illinois. Consisting of eleven, one-story buildings, the plant will be designed to eliminate the collection of contaminating materials in corners or crevices. Processing rooms are to be surfaced with special material to prevent the lodging of dust or bacteria and to facilitate cleaning. Rooms will be air conditioned. Glass-enclosed work spaces are to be provided, many protected by ultra-violet lamps. Five hundred persons will be employed in this new unit.

Heyden Expansion

The general expansion program of the Heyden Chemical Corporation, for 1951 will include construction of a new plant at Fords, N.J., to produce para-chloro-benzaldehyde, used in the preparation of dye intermediates and insecticides.

New Japanese Firm

Japanese Geon Company, Ltd., Kambara, Japan, newly-formed by the B. F. Goodrich Company and several Japanese industrial firms, will manufacture Geon polyvinyl chloride. Only construction and initial operations will be under the supervision of Goodrich engineers; operation will be fully staffed by Japanese.

Monsanto Increases Facilities

Monsanto Chemical Company will enlarge the research facilities of its Rubber Service Laboratories at Nitro, West Va. Construction, which will start shortly, will be completed early in 1952. The unit will require approximately eighty persons. Noteworthy is the flexibility of equipment which will enable grouping to accommodate requirements of any project. Large glass equipment will be utilized as well as illumination by specially designed, Lustrex styrene lattices in a sub-ceiling, acting as a reflector for fluorescent lighting.

New Plant

U.S. Industrial Chemicals, Inc., will erect a plant, at Kansas City, Kansas, for the monthly production of 2,500,000 pounds of Pyrenone Protectants, insecticides introduced in 1950 for insect control in wheat, and other grains. The location of this plant was selected for distribution convenience as well as to be near sources of raw materials.

Foote Mineral to Expand

Foote Mineral Company is spending $214,800 to expand the lithium refining capacity of its Exton, Pa. plant, to utilize a new Foote-discovered process for the production of all types of lithium. Construction will start late in May with production anticipated this fall. The plant will process lithium ores from Foote's new mines at Kings Mountain, N.C.

Manpower Strengthening Program

Henry F. Dever, president of Brown Instruments Div., Minneapolis - Honeywell Regulator Co., maintains that manpower strengthening programs will rival machine and tooling programs in importance, due to the growing manpower shortages, especially engineering manpower. Mr. Dever believes that industry should not ask deferment of workers, but meet the challenge by improved recruitment, training and performance of men and women in industry. He cautioned that care be given to wage and salary relationships between new and old employees, and emphasized the importance of supervisors in the organization.

Eli Lilly & Co. has increased the facilities and staff of the Lilly Research Laboratories to intensify research on new antibiotics, antiarthritic drugs, growth factors and other drugs, as well as to identify and evaluate new drugs.

Shortage of Engineers

A report of the Research Committee of the National Association of Manufacturers notes a shortage of engineers which will probably pyramid to a shortage of 40,000 engineering graduates by 1954, even without the influence of the draft. It further notes that 25 per cent of the technically trained men currently employed are reservists in the armed forces.

Stokes Increases Staff

F. J. Stokes Machine Co., Philadelphia, Pa., completing additions to their factory, has increased man-hours of production over 100 per cent in the last six months. The staff has increased by 80 per cent and the plant is operating on two nine-hour shifts, 5½ days a week. Serious consideration is given to the hiring of handicapped veterans and displaced persons. Women are replacing men in some capacities.

New Fisher Plant

Fisher Scientific Company, Pittsburgh, Pa., opened its new plant at 7722 Woodbury Drive, Washington, D.C., on December eighth. The new scientific supply house will serve as a stocking, shipping, and repair center for the Atlantic Seaboard area.

Aries Expands Facilities

R. S. Aries & Associates, 400 Madison Ave., New York, N.Y., have acquired the consulting chemical engineering business of William Y. Agnew, whose work has been in pigments, fertilizers, and engineering design.

West Coast Office

The Bellows Company, Akron, Ohio, manufacturers of "Controlled-Air-Power" devices for industrial use, has established a West Coast Regional Headquarters at 733 East Pico Blvd., Los Angeles, Calif.

Laboratory Expansion

Hercules Powder Company announces the completion of a three-story addition to the main Laboratory at its Experiment Station, Wilmington, Del., Research expenditures at Hercules amount to more than $4,000,000 annually, and over 650 people are employed at the Experiment Station.

Commercial Solvents to Move

Commercial Solvents Corporation will move its general offices to the building under construction at 260 Madison Ave., New York, N.Y., where it has leased the ninth and tenth floors. The building will be completed next fall.

New Chlorine Plant

Mathieson Alabama Chemical Corporation, a new, wholly owned subsidiary of Mathieson Chemical Corporation, will build a chlorine and caustic soda plant near Mobile, Alabama. The plant, to be in operation in early 1952, will require approximately one-hundred employees.

Resorcinol Plant Explosion

John P. Remensnyder, F.A.I.C., president of Heyden Chemical Corporation, announces that production schedules on other products are not affected by the temporary loss of the resorcinol plant at Garfield, N. J., which was partially destroyed by explosion on February 26th.

For Your Library

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

Springer-Verlag, Berlin W. 35: *Taschenbuch fuer Chemiker und Physiker,* by Jean D'Ans and Ellen Lax, 2nd ed., 1896 pp. 350 ill., DM 36. Because chemistry and physics are now such closely related sciences the old "Chemiker-Kalender" has been remodeled into this most complete compilation of facts and figures, many of them condensed into the 815 tables of the book. It is a useful reference volume for which teachers, students, chemists and engineers in laboratories and factories will thank the well-known publishers and their authors. • *Bakteriologie, Serologie und Sterilisation,* by Conrad Stich, 6th ed., 294 pp. 122 ill. This small textbook is of value to pharmacists and chemists in laboratories and industrial enterprises since it discusses systematically not only the basic facts of bacteriology and serology as sciences but gives in more than half of its pages instructional and practical information about the sterilization of drugs, ampuls, gauze, etc.

Eget Foerlag-Leijona Apteekki, Helsingfors, Finland: *Farmaseutiska och Kemiska synonymer,* with Supplement 1, by Y. W. Jalander, 1948/49, 570 and 47 pp., 7. This is a most useful and interesting compilation of pharmaceutical and chemical synonyms in alphabetical order. Its purpose is to disclose the multiplicity of tradenames of pharmaceuticals which so often is irritating to physicians, pharmacists and chemists. The author translated into universally used Latin more than 21,000 synonyms of specialities manufactured in Europe; sulfanilamide alone is listed under 30 different names! For compounds, their ingredients and their quantities are stated. The author succeeded admirably in solving the perplexing problems of nomenclature, spelling, and differences in strength of thousands of official drugs in various countries. I would like to suggest inclusion of American specialties in a revised edition or publication of a separate book dealing with American (and British) specialties only.

Walter de Gruyter & Co., Berlin W. 35; *Lehrbuch der anorganischen Chemie,* by A. F. Holleman and Egon Wiberg., 27th ed., 634 pp., 166 ill., DM 24. In my January column, I reviewed the organic part of this famous textbook—now the new edition of its inorganic part has become available. It is quite different from the "Holleman" I used some 30 years ago —particularly its introductory part about atoms and molecules has been completely revised and the description of the elements and their compounds brought up-to-date; yet it is still unchanged and unequalled in its solemn didacticism, its unusual completeness, and its almost classical style. • *Geschichte der Chemie,* 1, by Georg Lockemann, 1950, 142 pp., 8 ill., paper covers, DM 2.40. This is volume 264 of "Sammlung Goeschen"; it discusses the history of chemistry from ancient times until the discovery of oxygen in the 18th century. • *Grubengasanalyse im Kohlenbergbau,* by R. Kattwinkle, 1950, 80 pp., 30 ill., DM 8.40. An important little book, giving up-to-date information about simple and rapid methods for the analysis of coalmine gases, particularly "firedamp" (explosive methane-air mixtures).

Vandenhoeck & Ruprecht, Goettingen: *Fluoreszenz organischer Verbindungen,* by Theodor Foerster, 1951, 312 pp., 81 ill., DM 32.50. Investigations of fluorescence, especially of aromatic compounds, are of growing interest to the physicochemist since they extol new scientific aspects with regard to the electron structure of molecules. The final chapter of the book deals with the related phenomenon of phosphorescence. The author cites 800 literature sources.

Dr. Alfred Huethig, Heidelberg: *Internationaler Riechstoff-Kodex,* by Arno Mueller, 3rd ed., 377 pp., DM 28. An encyclopedic compendium of several thousand aromatic materials, listing their physical and chemical characteristics, with a tabulation of their 335 European, Israeli and American manufacturers, and other valuable compilations of practical value. Only the (English, French) "Key for Translation" seems somewhat inadequate and hidden (pages 360-361).

Librairie Armand Colin, Paris: *Chimique organique,* 3, by A. Kirrmann, 1950, 183 pp., paper covers, Fr. 180. A discussion of the functions of the more complex organic compounds.

Voluntary Protection for Technical Information

Secretary of Commerce Charles Sawyer announces a service to guard voluntarily against the harmful release of technical information, even though it is not subject to formal security restrictions. Industrialists, businessmen, scientists, public officials, or private citizens are invited to use this service whenever there is question about whether technical information should be disclosed. Requests for advice concerning the release of technical information, together with pertinent manuscripts, etc., should be addressed to: Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C.

New Publishing Firm

The Springer Publishing Company Inc., One Madison Avenue, New York 10, N. Y. has been founded by Bernhard J. Springer, who until 1936 was a member of the Springer Verlag of Berlin and Vienna. He came to the U.S. in 1937, worked for Williams and Wilkins until he joined the Army, and on his return served as vice president of Grune & Stratton. The Springer Publishing Company will send out its first list of books this summer. One of its authors will be Rudolph Seiden, F.A.I.C.

NPA Regulations

National Production Authority regulations, orders, forms, press releases and related material, issued by the Department of Commerce, may now be obtained direct from the Department. Government regulations require that payment in advance must be made for material for which there is a charge. Therefore, for convenience, arrangements have been made by which a "Deposit Account" may be established. Request information from the U.S. Department of Commerce, Div. of Printing Services, Room 6225, Washington 25, D.C.

Change of Name

Seventy-nine per cent of the fertilizer producers in this country plan also to manufacture insecticides and pesticides, according to a survey by *The American Fertilizer,* trade publication. Accordingly, to satisfy this interest, the magazine has been renamed *American Fertilizer and Allied Chemicals,* and technical experts in the insecticide field have been added to the staff. The publisher is Sam Lewis Veitch, 317 N. Broad St., Philadelphia 7, Pa.

We have just completed a study which shows that 32 per cent of our sales and 28 per cent of our profit for the first half of 1950 are on products new to the company since 1940. Most of these have come from our research and development program since the war.

—George B. Beitzel, President
The Pennsylvania Salt
Manufacturing Company

Radioisotopes

Brookhaven National Laboratory, Upton, N. Y. has been authorized by the U. S. Atomic Energy Commision to make available for distribution radioisotopes with very short half-lives; those of higher specific activity than are produced in the Oak Ridge National Laboratory reactor.

Milton Zucher, F.A.I.C., research manager, International Printing Ink, Elizabeth, N.J., will speak, May 22nd, on "The Graphic Arts," before the Pulp and Paper Division of the Chemical Enginering Department at the University of Maine.

Information

"Testing of Furniture Finishes." Booklet. Foster D. Snell, Inc., 29 West 15th Street, New York 11, N.Y.

"True Brite Insulator for Steam and Water Coils." True Brite Chemical Products Company, Oakville P.O., Conn.

"Fermentation Tanks and Acid-adjustment Tanks." National Annealing Box Company, Washington, Pa.

"New Rhoplex Emulsions for Paper, Paint, Ink and Other Industries." Bulletins. Rohm & Haas Co., Resinous Products Division, Washington Square, Philadelphia 5, Pa.

"Benjamin Lighting Equipment for Industry and Commerce." Bulletin. Benjamin Electric Mfg. Co., Des Plaines, Illinois.

"Castaloy Laboratory Appliances". Catalog. Fisher Scientific Company, 717 Forbes Street, Pittsburgh, Pa.

"New Automatic Pipette and new 'Micropette'." Information. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

"Beta Sodium Glycerophosphate." Eimer & Amend Div., Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

"Testing Instruments for the Paint and Other Industries." Gardner Laboratory, Inc., Bethesda, Md.

"Royalton Stainless Steel Beakers." Myers Scientific Supply Co., Inc., 221 Atlantic Ave., Brooklyn 2, N.Y.

"Model 800D. Improved Shaded Pole Motor." Howard Industries, Inc., Racine, Wisconsin.

"Lanco Apparatus News." Arthur S. La Pine & Co., 121 W. Hubbard St., Chicago 10, Ill.

"Glutathione." Technical bulletin 100a. Schwarz Laboratories, Inc., 202 E. 44th St., New York 17, N.Y.

"Stokes 43B Oscillating Granulator." F. J. Stokes Machine Co., 5900 Tabor Rd., Philadelphia 20, Pa.

"Packings for the Chemical Industry." Crane Packing Co., Dept. L-18, 1800 Cuyler Ave., Chicago 13, Ill.

"Water Patrol for Profit Control." Brochure. Aquatrol, Inc., P. O. Box 12233, Houston, Texas.

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"American Standard Safety Code for Ventilation and Operation of Open-Surface Tanks, Z9.1-1951." 75¢ per copy. American Standards Association, 70 E. 45th St., New York 17, N.Y.

"Serum Acid & Alkaline Phosphatase Determination." Bulletin 104. Sigma Chemical Co., 4648 Easton Ave., St. Louis 13, Mo.

"Colloidal Graphite as a Parting Compound." Bulletin No. 427. Acheson Colloids Corp., Port Huron, Mich.

"Continuous Combustible Gas Alarm System. Davis Instruments Div., Davis Emergency Equipment Co., Newark, N.J.

"Instruments Accelerate Research." Bulletin 15-14. 82 pp. Brown Instruments Division, Minneapolis-Honeywell Regulator Company, Philadelphia 44, Pa.

"Modification of Starches, Proteins and Gums with Peroxygen Compounds." Bulletin SPG-1. Becco Sales Corp., Station B, Buffalo 7, N.Y.

"Symposium on Rapid Methods for the Identification of Metals." Special Tech. Publication No. 98. 84 pp. $1.75. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

"Research and Development Digest (Unclassified) Department of the Army." Concerns research activities and interests of the Army. Assistant Chief of Staff, G-4, Logistics, General Staff, Department of the Army, Washington 25, D.C.

"How to Sell to the United States Army." Procurement Information Center, Office of the Under Secretary of the Army, Washington 25, D.C.

"Annual Report of the Research Laboratories, 1950." National Canners Association, Washington, D.C.

"Control Guide." Regulations covering prices, production, etc. The Journal of Commerce, 63 Park Row, New York, N.Y.

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New York, N. Y. 50 E. 41st St.

"ASTM Manual on Quality Control of Materials (STP 15-C)". 100 pp. $1.75. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

"Polyalcohol End Use Picture 1950." Association of American Soap & Glycerine Producers, Inc., 295 Madison Ave., New York 17, N.Y.

"Tables for Conversion of X-ray Diffraction Angles to Interplanar Spacing." 159 pp. $1.75. Supt. of Documents, U.S. Gov. Printing Office, Washington 25, D.C.

"Instrument News", Publication (quarterly) of The Perkin-Elmer Corp., Glenbrook, Conn.

"New Bung Bushing Barrel Pump." General Scientific Equipment Co., 2700 W. Huntington St., Philadelphia 32, Pa.

Condensates

Ed. F. Degering, F.A.I.C.

The Miner Laboratories

2, 4, 5 - Trichlorophenoxyacetic acid, known as 2,4,5-T, is especially effective in killing brambles, brush, and tree stumps, which resist 2,4-D.

About two million cubic feet of raw gas can be produced daily from 28 tons of coal, 24 tons of oxygen, and 35 tons of superheated steam, by use of a new gasification unit.

A wise man adapts himself to circumstances, as water shapes itself to the vessel that contains it.—Chinese proverb.

The taxes paid by Shell Oil Company amounted to $2,058 for each of their employees.

An insect-repellant treatment for cotton bags, believed to be commercially practicable, consists of impregnation with a mixture of pyrethrins and piperonyl butoxide.

The brewing industries in the U.S., last year, used about 1,500,000 tons of malt, 400,000 tons of corn, 150,000 tons of rice, 90,000 tons of sugar, and 20,000 tons of hops.

Elemental boron 10 is now available from the Atomic Energy Commission.

Even parasites serve as hosts to other parasites as evidenced by the fact that fungi of one type or another parasitize insects of every variety, as well as *Arachnida*—scorpions, spiders, and ticks.

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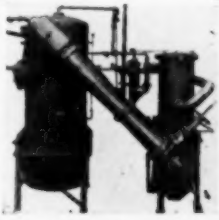

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THE CHEMIST on Microfilm

Subscribers to THE CHEMIST, who have space or storage problems can now obtain microfilm copies of this publication from University Microfilms, 313 N. First Street, Ann Arbor, Michigan. Volume XXVI, Nos. is now available at $1.50. Also the 1950 Volume is now ready.

National Council Meetings

A meeting of the Board of Directors of the AIC will be held at 12:30 noon at The Chemists' Club, New York, N.Y. on June 13, 1951. A meeting of the National Council will be held at 6:30 P.M. on the same day at the same place.

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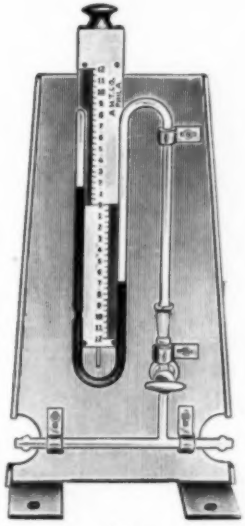

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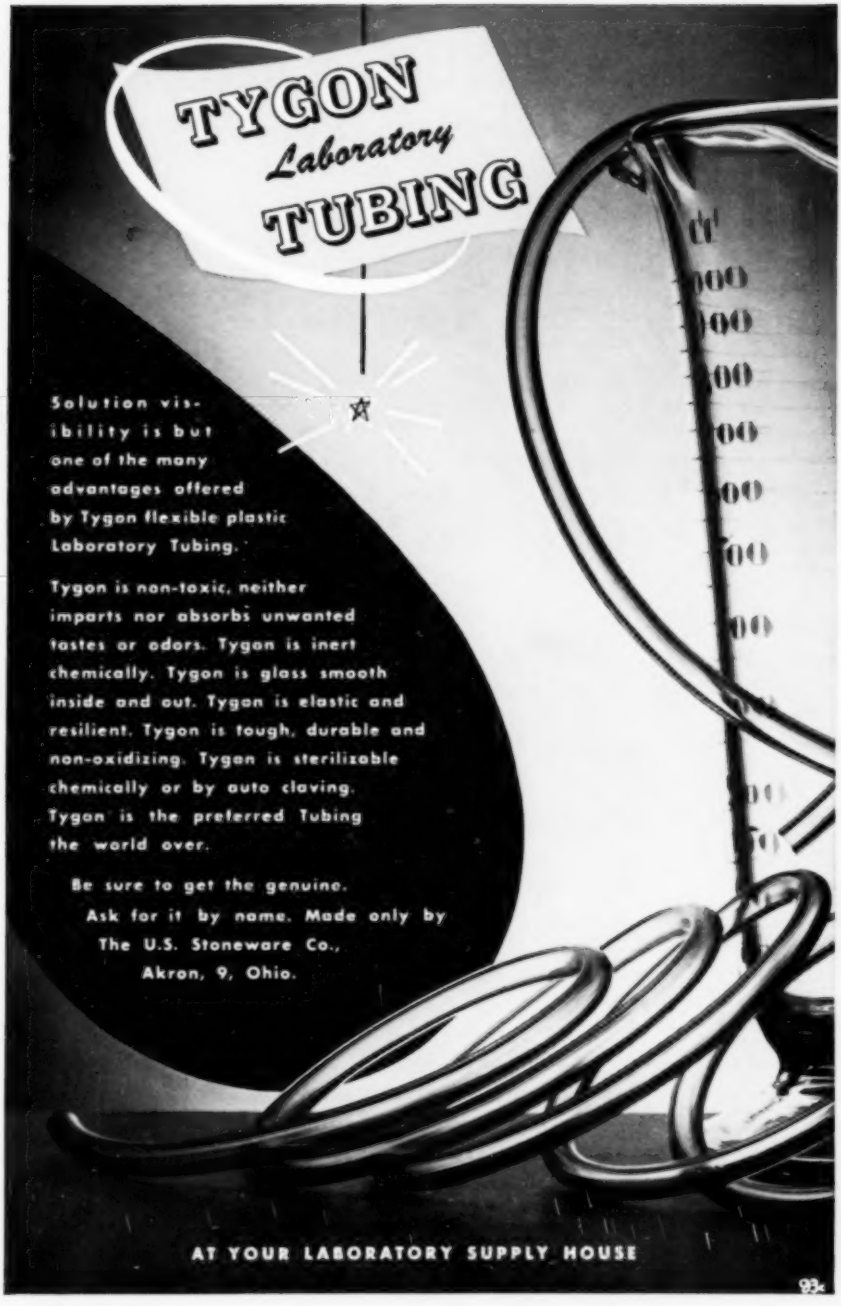
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